

CLAIMS

1. A Mo-W material for the formation of wirings, consisting essentially of as viewed integrally 20 to 95% of tungsten and the balance of molybdenum and inevitable impurities by atomic percentage.
2. The Mo-W material according to claim 1, wherein the proportion of said tungsten in the whole composition is in the range of from 20 to 70% by atomic percentage.
3. The Mo-W material according to claim 1, wherein the proportion of said tungsten in the whole composition is in the range of from 25 to 45% by atomic percentage.
4. The Mo-W material according to claim 1, wherein said tungsten and said molybdenum are compounded and integrated.
5. A Mo-W target for the formation of wirings, consisting essentially of as viewed integrally 20 to 95% of tungsten and the balance of molybdenum and inevitable impurities by atomic percentage.
6. The Mo-W target according to claim 5, wherein said tungsten and said molybdenum are compounded and integrated.
7. The Mo-W target according to claim 5, wherein said tungsten and said molybdenum are alloyed.
8. The Mo-W target according to claim 6, which comprises a sinter obtained by the powder metallurgy technique.
9. The Mo-W target according to claim 6, which comprises a material obtained by hot working a sinter produced by the powder metallurgy technique.
10. The Mo-W target according to claim 6, which comprises an alloy ingot produced by the smelting technique.

11. The Mo-W target according to claim 6, which possesses relative density of not less than 98%.

12. The Mo-W target according to claim 6, the crystal grains of which have an average particle diameter of not more than 200 μm .

13. The Mo-W target according to claim 6, which possesses Vickers hardness, Hv, of not more than 350.

14. The Mo-W target according to claim 6, which possesses a metallic texture comprising a uniform solid solution phase of Mo and W.

15. A Mo-W target for the formation of wirings, formed of a Mo-W alloy consisting essentially of 20 to 95% of tungsten and the balance of molybdenum and inevitable impurities by atomic percentage and possessing relative density of not less than 98%, average particle diameter of crystal grains of not more than 200 μm , and Vickers hardness, Hv, of not more than 350.

16. A method for the production of a Mo-W target for the formation of wiring, comprising a step of shaping a mixed powder composed of 20 to 95% of tungsten and the balance of molybdenum and inevitable impurities by atomic percentage, a step of sintering the shaped mass obtained in said shaping step in a reducing ambience, and a step of hot working the sintered mass obtained in said sintering step.

17. The method according to claim 16, which further comprises a step of subjecting the worked material obtained in said hot working step to a strain-relieving heat treatment.

18. A Mo-W wiring thin film consisting essentially of 20

to 95% of tungsten and the balance of molybdenum and inevitable impurities by atomic percentage.

² 19. The Mo-W wiring thin film according to claim ¹ 18, wherein the proportion of said tungsten in the whole composition is in the range of from 20 to 70% by atomic percentage.

³ 20. The Mo-W wiring thin film according to claim ¹ 18, wherein the proportion of said tungsten in the whole composition is in the range of from 25 to 45% by atomic percentage.

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